

ENVIRONMENTAL PROTECTION AGENCY

REGION III

INTERIM CONSTRUCTION INSPECTION REPORT

Section I. General

1. Applicant Hamilton Township Municipal Authority

2. Project Number C-420916-01 Date Visited 6 June 1979

Date Prior Visit 7 March 1979

3. Status of Schedule: Date Construction Start 11 January 1979

Original Completion Date 3 July 1980

Revised Completion Date 6 July 1980 (Three Day Time Extension
by change order)

Scheduled percent this date 10%*

Actual percent this date: By EPA Payments 16.6%

* Mr. Arrowood has requested revised progress
schedule from Contractor to accurately reflect By Construction
scheduled progress.

Inplace 31%

4. This inspection performed by James A. Smith, Jr., P.E., U. S. Army, Corps
of Engineers, Chambersburg Area Office, Telephone No. (717) 264-8012

5. Consultant Arrowood, Inc., 2400 Philadelphia Avenue, Chambersburg, PA 17201

6. Persons Contacted:

<u>Name</u>	<u>Title</u>	<u>Telephone</u>
<u>Dennis Black</u>	<u>Resident Engineer, Arrowood</u>	<u>(717) 264-4540</u>
<u>W. L. Arrowood</u>	<u>President, Arrowood, Inc.</u>	<u>(717) 263-8794</u>
<u>Laurie Greene</u>	<u>Accountant, Arrowood, Inc.</u>	<u>(717) 263-8794</u>

7. Brief Project Description:

Construct gravity pipelines, force mains, and five pumping stations to
service approximately 1500 EDU in Hamilton Township.

Contracts

<u>Contract</u>	<u>Contractor</u>	<u>Description of Work</u>	<u>Amt.</u>	<u>Date Start</u>	<u>% Complete</u>
1 thru 4	Gerl Constr. Company	Gravity and Force Main Sewers	\$5,121,559	11 January 79	36%
5	Conowago	Pump Stations	\$ 844,848	11 January 79	0%

8. General Maintenance and Site Conditions General site conditions are satisfactory. Sites are policed daily and trenches closed up or barricaded. Water trucks are used for mud and dust control. Traffic on state roads is maintained and protected by signing, pylons, and flagmen.

9. Plant or Unit Process Bypassing During Construction N/A

10. Project Sign Two, erected at field office.

11. Federal Wage Rates Posted Yes, at Contractor's Field Trailer.

Section II. Administration/Management

1. Daily log of construction, who keeps-acceptability.

Each inspector keeps a daily log, Resident Engineer maintains a mast diary (hard bound books). Resident Engineer and Inspector's logs were accurate and up-to-date.

2. Method of recording construction deficiencies and method of recording correction thereof. (Attach copies showing complete sequences).

Deficiencies are generally recorded on the quantity sheets and inspector's field books. Corrections were reported as being recorded in the field books, also.

3. Change Orders. How many - how estimated and approved prior to commencing work.

Four change orders have been approved by the Authority. Change orders for unit price items are estimated by the Consultant, recommended to the Authority by Mr. Arrowood and approved by the Authority. Non-unit price items are estimated by Consultant and cost negotiated with Contractor.

List three largest:

Change No.	Contract	Description of Work	Initiated By	Amount	Date Started	Date Approved	(By Authority)
		Construct additional service		INCREASE			
1	Alt. No. 1	tap to Chbg. Interceptor	Consultant	\$2,887.13	12/2/78	5/8/79	*
		Relocate manhole and		DECREASE			
3	Alt. No. 1	minor grade changes	Consultant	\$2,141.91	4/11/79	5/8/79	
		Revise sewer		DECREASE			
8	Alt No. 1	Alignment	Consultant	\$1,558.14	4/20/79	5/8/79	

* Three day time extension granted for Change Order No. 1.

4. Number of EPA payment requests submitted & total amount (5) \$1,256,800.00

Number of payments received by applicant & total amount (4) \$993,200.00

5. Construction inspection

Name of Supervising Inspector Dennis Black

Name of Inspectors Lisa Hoover (Clerk), K. Shives, T. Crouse, G. Diehl, K. Breighner, J. Phipps (T. Nickolas - paid by Authority).

Describe chain of command and efficiency of operation.

Inspectors report to Mr. Black, Resident Engineer, who reports to Mr.

Arrowood, President. Mr. Arrowood in turn reports to the Authority.

6. Treatment plant operation during construction. New N/A Addition N/A
If addition or modification, obtain past and present operational records.
Include copies of permit data or complete the below:

Permit No. N/A

Permit Parameters	Prior to Construction	During Construction
	(Date _____)	(Date _____)
	<u>Infl</u> _____ <u>Effl</u> _____	<u>Infl</u> _____ <u>Effl</u> _____

N/A

N/A

7. Operating Staff - ~~Either~~ existing or planned for facility. (Indicate certifications). Inspectors - J. Wingert and T. Nicholas; Administrator - G. Gerellis. (Employed full-time by Authority.)
50%, Plant Operator NOTE: T. Nicholas on loan to Arrowood.
90%, Fully Staffed

Section III. Quality of Construction

1. Test Requirements:	<u>Test Result</u>	<u>Spec. Req't</u>	<u>Final Resolution</u>
Soil Compaction	See Page 4a of 6 for Test Requirements		
Concrete Cylinder			
Equipment			
Sewer Line Grades			
Other			

2. Appearance of Construction

Concrete work Concrete strength and placement in manholes to date is satisfactory. Risers are properly supported. Pipe encasements, where required, are satisfactory.

Earth work Satisfactory. Trenches are properly braced by trench boxes and/or bracing. Backfill is tamped by hand wackers. Compaction test results to date are satisfactory.

Electrical work None to date (pump stations).

Form and Frame work None to date (pump stations).

Section III. Quality of Construction

1. Test Requirements:

	<u>Test Results</u>	<u>Specification Requirement</u>	<u>Final Resolution</u>
Soil Compaction	95.1% average of tests run to date.	90% of maximum den- sity by AASHTO Method T-99. Maximum 50 tests on project	Passed
Concrete Cylinder Average of tests to date.	Class A-3515 psi.	Class A-3000 psi min.	28 day breaks, passed.
	Class B-2441 psi.	Class B-2500 psi min.	7 day breaks (awaiting 28 day reports).
Equipment	None installed to date.	Shop drawings and operational tests for pump station equipment.	----
Sewer Line Grades	Inspectors check grades and align- ment daily.	Branches and center- line of manholes checked by Contrac- tor. Cut sheets sub- mitted to and checked by Inspector.	No problems en- countered to date.

Other

Certifications for pipe and pre-cast manholes on file. Air tests performed according to attached schedule (Attachment No. 1). Test logs are up-to-date, only one section to date has failed. That section will be replaced and re-tested.

Masonry work Walls on pump station foundation are satisfactory.

Mechanical work None to date (pump stations).

Pipeline construction Pipes are properly bedded and true to line and grade. Air test results are properly documented and up-to-date. Only one section in 50 tested has failed and is being repaired by contractor.

Paving and street repair Some problems have been encountered with temporary cold patch. Letter of PennDOT's inspection dated 4 June 1979 is attached (Attachment No. 2). Matters are presently being resolved. Traffic control problems mentioned in Item No. 3 of that letter have not been observed by this inspector.

3. How is work approved prior to payment? By whom? (for unit price items)

Mr. Arrowood reports that the Resident Engineer makes his own payment estimate, compares this to the Contractor's estimate and finalizes this with contractor. Mr. Arrowood then submits estimate to Authority to payment. Resident Engineer and Inspectors measure quantities for unit price items on a daily basis.

4. How is received equipment inspected and approved prior to payment.

Equipment and materials are checked by inspectors prior to installation and payment. Materials are paid for only after installation with the exception of pumps.

Section IV. Summary of Significant Construction or Management Deficiencies.

None

Section V. Interferences to job (Strikes, equipment, deliveries, etc., and proposed resolution).

None reported.

Section VI. Permit Program

1. Was a Section 404 or Section 404/10 permit issued? Yes _____ No X
2. If yes, does construction appear to be in compliance with the plans and conditions of the permit?
3. If no, is any work being performed or proposed in any waterway, wetlands, etc.? Yes X (give details) No _____

Four small stream crossings are in contract and covered by Nationwide Blanket Permit. Construction to date has been according to Section 404 Parameters and sedimentation control provisions of the contract.

Section VII. Brief abstract of the interim inspection.

1. Inspection conducted by Engineers Field Office and Main Office. The Grantee did not attend.
2. The construction is presently ahead of schedule and no delays are anticipated. Quality of construction is satisfactory and meets requirements of contract. Testing to date has been properly conducted and documented.
3. Four change orders have been approved by the Authority and are awaiting Farmers Home Administration approval prior to submission.
4. The Grant Payment Schedule has been exceeded and a revised schedule has been submitted to EPA for approval (Attachment No. 3).
5. Property owners have been mailed an information brochure explaining lateral connections and important items of the project (Attachment No. 4).
6. Payrolls were reviewed for the period 8 January thru 22 April 1979. Contractor has several employees classified as "manhole builders". Since there is no minimum wage determination for this trade, advised Mr. Arrowood that the Contractor must request one from Department of Labor. *
7. Overall condition of Project at the time of this inspection is satisfactory.

* Manhole Builder is covered under duties of Class 3 Laborer - Classification No. PA 78-3005.